

ABSTRACT OF THE DISCLOSURE

A tuning circuit using a negative resistance circuit for compensating an equivalent series resistance component thereof is provided. The negative resistance circuit has simple circuit construction and design and adjustment thereof is easy.

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← The tuning circuit comprises a series resonance circuit and a negative resistance circuit connected to the series resonance circuit in series. In the negative resistance circuit, a first transistor constitutes an inverse amplifier by providing a resistor in an emitter circuit thereof and a second transistor constitutes an emitter follower circuit. A positive feedback circuit is constituted by feeding back an output of the emitter follower circuit to an emitter circuit of the first transistor and a negative feedback circuit is constituted by feeding back an output terminal to a base circuit of the first transistor. Thus a negative resistance is produced between this base input terminal and an earth. In this case, since a desired negative resistance value is obtained by adjusting a feedback quantity of both the feedback circuits, Q of the tuning circuit can be set to a desired value.